

WHAT IS CLAIMED IS:

1. An image read apparatus comprising:

a first sensor including a plurality of light receiving devices arranged in a main scanning direction;

a second sensor which includes a plurality of light receiving devices arranged in the main scanning direction and which is disposed at a predetermined distance from the first sensor in a sub-scanning direction;

a first output unit that outputs a pixel signal obtained from each light receiving device of the first sensor in an arrangement order of the light receiving devices;

a second output unit that outputs pixel signals obtained from even-numbered light receiving devices in the light receiving devices constituting the second sensor in the arrangement order of the light receiving devices;

a third output unit that outputs the pixel signals obtained from odd-numbered light receiving devices in the light receiving devices constituting the second sensor in the arrangement order of the light receiving devices;

a conversion unit that converts the pixel signals from the respective output units into pixel data which are digital signals; and

a pixel data storage unit that stores the pixel data outputted from the conversion unit,

the image read apparatus further comprising:

an information storage unit in which information with respect to the number of pixels outputted per scanning by each output unit is stored for each output; and

a pixel data storage limiting unit that limits the pixel data to be stored in the pixel data storage unit based on the information stored in the information storage unit.

2. The image read apparatus according to claim 1, wherein

the first output unit outputs the pixel signals obtained from the respective light receiving devices of the first sensor in an arrangement order of the light receiving devices for a predetermined period,

the second output unit outputs the pixel signals obtained from even-numbered light receiving devices in the light receiving devices constituting the second sensor in the arrangement order of the light receiving devices for the predetermined period,

the third output unit outputs the pixel signals obtained from odd-numbered light receiving devices in the light receiving devices constituting the second sensor in the arrangement order of the light receiving devices for the predetermined period,

the information storage unit includes pixel number information storage unit in which information with respect to

the number of pixels outputted per scanning by each output unit is stored, and

the pixel data storage limiting unit limits the pixel data to be stored in the pixel data storage unit based on the pixel number information so that the number of the pixel data stored in the pixel data storage unit agrees with the number of pixels outputted from each output unit.

3. The image read apparatus according to claim 2, wherein the pixel number information storage unit stores information showing the number of pixels outputted per scanning by each output unit as the pixel number information per each output unit.

4. The image read apparatus according to claim 2, wherein information of the number of pixels outputted per scanning by the first output unit is stored as the pixel number information in the pixel number information storage unit, and

the pixel data storage limiting unit obtains the number of pixels outputted per scanning by each output unit, and limits the pixel data stored in the pixel data storage unit based on the number of pixels.

5. The image read apparatus according to claim 2, wherein the pixel data storage limiting unit limits the pixel

data stored in the pixel data storage unit immediately after the conversion unit outputs the pixel data.

6. The image read apparatus according to claim 2, wherein the pixel data storage unit comprises:

a storage section in which pixel data is stored; and

a write unit that writes the pixel data outputted from the conversion unit into the storage section, and

the pixel data storage limiting unit limits a write operation of the pixel data into the storage section by the write unit.

7. The image read apparatus according to claim 2, wherein the conversion unit is constituted to execute the conversion of the pixel signal from each output unit into the pixel data in accordance with a conversion command inputted from the outside, and

the pixel data storage limiting unit controls input of the conversion command into the conversion unit so that the conversion unit converts only the pixel signal outputted from each output unit into the pixel data.

8. The image read apparatus according to claim 1, wherein

respective ranges of the light receiving devices that

output valid pixel signals is defined in the first and second sensors,

the information storage unit includes start pixel information storage unit in which start pixel information with respect to the number of pixels required until the valid pixel signal starts to be outputted in the pixel signals outputted per scanning by each output unit is stored, and

the pixel data storage limiting unit limits the pixel data to be stored per scanning by each output unit based on the start pixel information.

9. The image read apparatus according to claim 8, wherein the start pixel information storage unit stores information showing the number of pixels required until the valid pixel signal starts to be outputted in the pixel signals outputted per scanning by each output unit as the start pixel information per each output unit.

10. The image read apparatus according to claim 8, wherein information of the pixel number required until the valid pixel signal starts to be outputted in the output per scanning by the first output unit is stored as the start pixel information in the start pixel information storage unit, and

the pixel data storage limiting unit obtains the pixel number required until the valid pixel signal starts to be

outputted in the output per scanning by each output unit from the start pixel information, and limits the pixel data stored in the pixel data storage unit based on the number of pixels.

11. The image read apparatus according to claim 8, wherein the information storage unit includes a pixel number information storage unit in which pixel number information with respect to the number of valid pixels outputted per scanning by each output unit is stored, and

the pixel data storage limiting unit limits the pixel data to be stored per scanning by each output unit based on the start pixel information and pixel number information so as to prevent the pixel data storage unit from storing pixel data after end of the output of the valid pixel signal.

12. The image read apparatus according to claim 11, wherein the number of valid pixels outputted per scanning by the first output unit is stored as the pixel number information in the pixel number information storage unit, and

the pixel data storage limiting unit obtains the number of valid pixels outputted per scanning by each output unit from the pixel number information, and limits the pixel data to be stored by the pixel data storage unit based on the number of valid pixel signals.

13. The image read apparatus according to claim 8, wherein the pixel data storage limiting unit limits the pixel data to be stored by the pixel data storage unit immediately after the conversion unit outputs the pixel data.

14. The image read apparatus according to claim 8, wherein the pixel data storage unit comprises: a storage section in which the pixel data is stored; and a write unit for writing pixel data outputted from the conversion unit into the storage section, and

the pixel data storage limiting unit limits a write operation of the pixel data into the storage section by the write unit.

15. The image read apparatus according to claim 8, wherein the conversion unit is constituted to execute the conversion of the pixel signal from each output unit into the pixel data in accordance with a conversion command inputted from the outside, and

the pixel data storage limiting unit limits input of a conversion command into the conversion unit so that the conversion unit converts the pixel signal corresponding to the valid pixel signal into the pixel data.